SUPREME COURT, U. S.
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No. 74-860

In The

Supreme Court of the United States

January Term, 1975

JAMES BURTCHETT, *Petitioner,*

-vs-

THE STATE OF MONTANA, *Respondent.*

BRIEF IN OPPOSITION TO PETITION FOR CERTIORARI TO THE SUPREME COURT OF THE STATE OF MONTANA

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STATEMENT OF FACTS

Yeager, a chemist at Northern Montana College, testified for the defendant. The substance of his testimony was that he could heat samples of unburned flooring impregnated with the asphalt base or smoke from the burner used to thaw pipes and determine by gas chromatography if the elements common to gasoline were present in the impregnated flooring. Excerpts from the transcript indicating Yeager's qualifications and his method are contained in Appendix A.

The deputy state fire marshall sent samples of burned flooring from defendant's house to the Alcohol, Tobacco and Firearms Laboratory of the U.S. Department of Treasury. Midkiff, chemist for that laboratory, conducted tests on those samples and determined that gasoline had been present in the burned area by means of a form of gas chromatography which does not involve heating the material to be tested. He testified that this method is widely accepted in the professional community of forensic chemists in the arson field and is very accurate. However, this method cannot be used to detect the presence of volatile petroleum distillate such as gasoline in material which has been stored in the open for several months. He further testified that in fact there is no reliable scientific means of detecting such volatile petroleum distillates after such a time period has elapsed and that Yeager's testimony that the same results could be obtained by the heating method was incorrect and had resulted from Yeager's lack of familiarity with Midkiff's method. Pertinent excerpts from Midkiff's testimony, including his qualifications, are set out in Appendix B.

The state's expert Pro testified that the presence or absence of asphalt, linoleum, and soot—including soot from traces of gasoline in the burner used to thaw the pipes—on the flooring would not have affected Midkiff's test. Excerpts from Pro's testimony are contained in Appendix C.

ARGUMENT

I.

THE REMEDY OF CERTIORARI IS INADEQUATE BECAUSE NO HOLDING BENEFICIAL TO PETITIONER WOULD RESULT FROM THIS COURT GRANTING THE WRIT.

Petitioner's allegation of prejudice arises from the fact that he was not able to provide unburned flooring for Yeager his chemist to examine. Petitioner hoped that Yeager's testimony would show that the same elements which Midkiff found in the burned flooring were present in the unburned flooring. Thereby petitioner hoped to imply that the elements upon which Midkiff relied to reach his conclusion that gasoline was present could actually have come from the adhesives and soot in the flooring.

However, both Midkiff and Pro testified that the presence or absence of the soot and adhesives would not have affected the results of Midkiff's tests. The only means by which Midkiff's test could be impeached was a similar test in which heating was not used. By the time a charge could have been filed against petitioner, that test would not have been useful in showing that gasoline had been present in the unburned flooring because any gasoline that was present at the time of the fire would have evaporated. And, as the Montana Supreme Court pointed out, the sample which Midkiff used was still intact and available to the defendants should they wish to dispute Midkiff's basic finding that gasoline was present in the sample of the burned flooring.

In other words, of all the substances alleged to have been present in petitioner's flooring, only gasoline or white gas evaporates at room temperature. Midkiff's experiment was conducted at room temperature and elements found in gasoline were detected in the air surrounding the flooring samples. From this he concluded that gasoline or white gas was present in the sample flooring. Defend-

ant's expert intended to cast doubt on Midkiff's testimony by showing that elements common to gasoline were present in unburned segments of the flooring. However, Midkiff's conclusion was based not solely on the presence of these elements, but rather their presence in the air at room temperature. Thus, Yeager could not discredit Midkiff's test by means of a test in which heat is used.

The Montana District Court accepted Midkiff's and Pro's testimony to the effect that the defendant would not be able to impeach Midkiff's test using a heat test. The Montana Supreme Court affirmed that finding.

Review on certiorari is a matter of sound judicial discretion and a general rule for the exercise of that discretion is:

> Where no jurisdictional fact is in dispute, the review on certiorari, as a general rule, does not extend to the consideration of the probative force of conflicting testimony, and, therefore, where there is some evidence, the weight and sufficiency thereof as to the facts on which the determination below was based, ordinarily will not be considered. 14 C.J.S., Certiorari §172 b.(1) (1939).

Out of this rule two exceptions have been engrafted. This court "will review the finding of facts by a state court where a federal right has been denied as the result of a finding shown by the record to be without evidence to support it; or where a conclusion of law as to a Federal right and a finding of fact are so intermingled as to make it necessary, in order to pass upon the federal question, to analyze the facts." *Fiske v. Kansas*, 274 U.S. 380, 385-386 (1927).

In the present case there is ample evidence supporting the Montana District and Supreme Court's finding of no actual prejudice. See Appendices B and C. In addition, it is not necessary to analyze the facts to pass upon the federal question in the present case. The Montana courts' conclusion of law, that a showing of either actual prejudice or intentional delay violates defendants Fifth

Amendment rights, is not intermingled with the finding that there existed neither of these factors as a result of the state's delay.

Furthermore, the Montana Supreme Court here interpreted *United States v. Marion*, 404 U.S. 307 (1971) to hold that a demonstration of either actual prejudice or intentional delay on the part of the state will necessitate dismissal of the prosecution. This is the interpretation most favorable to the defendant. Consequently, in requesting this court to grant certiorari and hold for the defendant thereafter, petitioner is requesting this court to review the factual findings of the Montana courts.

However, where neither of the criteria of *Fiske* are met, this Court will accept the Montana courts' findings of fact. As to the interpretation of the *Marion* case, the most that could be expected from this court would be an interpretation of *Marion* similar to that which the Montana Supreme Court has already made. Consequently, no beneficial result for petitioner will come from the granting of certiorari in this case. A general rule in the exercise of discretion is that "the writ of certiorari will not be granted where the remedy afforded will be inadequate or where no beneficial result will follow." 14 C.J.S., Certiorari, §12 (1939). Because no result beneficial to defendant will follow, the writ should not be granted.

II.

THE MONTANA SUPREME COURT CORRECTLY INTERPRETED THE *MARION* DECISION IN THE PRESENT CASE.

Petitioner contends that this court should grant his petition because of alleged confusion among the circuits as to the ruling in *Marion*. Presumably his authority for this proposition arises from section 1(b) of Rule 19 of the Supreme Court Rules which states that a factor to be considered governing review of certiorari is "(w)here a court of appeals has rendered a decision in conflict with the

decision of another court of appeals on the same matter." Even if we assume arguendo that the courts of appeals have issued conflicting opinions on the scope of *Marion*, this is not grounds for this court to issue a writ of certiorari because Section 1(b) is intended to apply to courts of appeals decisions and not to state court decisions.

The criteria for issuance of writs from state court decisions is found in section 1(a) of Rule 19 which sets out as a criteria "(w)here a state court has decided a federal question of substance not theretofore determined by this court, or has decided it in a way probably not in accord with the applicable decisions of this court." Petitioner herein must rely upon the second part of section 1(a) and contend that the Montana Supreme Court has incorrectly interpreted the *Marion* decision. Defendant in so contending quotes this court as follows:

> We need not and could not now determine when and in what circumstances actual prejudice requires the dismissal of prosecution. Actual prejudice to the defense of a criminal case may result from the shortest and most necessary delay; and no one suggests that every delay caused detriment to a defendant's case should abort a criminal prosecution . . . (T)he rights of defendant to a fair trial will necessarily involve delicate judgment based on the circumstances of each case. 404 U.S. at 324-325.
>
> No actual prejudice to the conduct of the defense is alleged or proved, and there is no showing that the Government intentionally delayed to gain some tactical advantage over appellees or to harass them. 404 U.S. at 326.

In his concurring opinion Justice Douglas stated that the courts must avoid "today's mechanical approach to the application of basic constitutional guarantees." *Marion*, *supra* at 333.

The message of this court in the *Marion* case is clear. Although the Justices disagree as to the Constitutional basis for their decision, they do agree that there can be

no set formula for determining when delay in instituting prosecution should lead to dismissal of the prosecution. They also agree that certain criteria among others should be used: actual prejudice to the defendant, intentional delay on the part of the state, and the possibility that the defendant cannot have a fair trial. This Court intends that the lower courts should use these criteria on a case by case basis to determine whether particular prosecution should be dismissed. This is exactly what the Montana Supreme Court did in deciding the present case. It's final decision was that because there was neither evidence that the state's delay in instituting prosecution prohibited the defendant from introducing evidence which would have aided him in his defense nor an allegation of intentional delay on the part of the state, the prosecution need not be dismissed. The Montana Supreme Court was correct in its interpreta on of the *Marion* case and this court should not grant certiorari for that reason.

III.

THERE IS NO GENUINE CONFLICT BETWEEN THE COURTS OF APPEALS AS TO THE INTERPRETATION OF THE *MARION* CASE.

Although the dicta of various opinions indicate that the courts are not certain whether only actual prejudice or actual prejudice and intentional delay require dismissal of prosecution, there is no conflict between the rulings of any of the Courts of Appeals cases cited by petitioner. In all but two of these cases cited by petitioner in the portion of his brief dealing with the confusion among the circuits, the court found that the evidence did not merit dismissal of the prosecution and in so holding found that the defendant had failed to demonstrate even the requisite prejudice. See *United States v. Stein*, 456 F.2d 844, 849 (2d Cir. 1972); *United States v. Iannelli*, 461 F.2d 483, 485 (2d Cir. 1972); *United States v. Dukow*, 453 F.2d 1328, 1331 (3d Cir. 1972); *United States v. Edwards*, 458 F.2d 875, 882 (5th Cir. 1972); *United States v. Hoatt*, 461 F.2d

1061, 1066 (7th Cir. 1972); *United States v. White*, 470 F.2d 170, 175 (7th Cir. 1972); *United States v. Emory*, 468 F.2d 1017, 1020 (8th Cir. 1972); *United States v. Griffin*, 464 F.2d 1352, 1355 (9th Cir. 1972); *United States v. Delicante*, 468 F.2d 151, 157 (7th Cir. 1972); *United States v. Daley*, 454 F.2d 505, 508 (1st Cir. 1972); *United States v. Merrick*, 464 F.2d 1087, 1091 (10th Cir. 1972).

In the remaining two cases, both of which defendant cites for the proposition that some courts require a showing of both prejudice and intentional delay, and which contain language to that effect, there exist factors which reduce the effect of that language so as to render it dicta. The *Lee* case is a per curiam opinion, which petitioner quite properly notes. *United States v. Lee*, 458 F.2d 32 (9th Cir. 1972). In that case the Court of Appeals so merely stated:

> Appellent was tried only two months after he became an "accused," and there is nothing to indicate that the pre-indictment delay was purposeful and that appellent suffered substantial prejudice from the delay. *Lee*, *supra* at 33.

The implication from the brevity and per curiam nature of the opinion is that the defendant's contentions were so devoid of merit that it was not necessary to reach the question of whether actual prejudice only is enough to merit dismissal of the action or whether intentional delay is also required.

The *Beitscher* case is distinguishable from the present case in that the defendant contended:

> . . . that the delay was inherently prejudicial, constituting a denial of their Fifth and Sixth Amendment rights to due process and to a speedy trial. *United States v. Beitscher*, 467 F.2d 269, 272. (10th Cir. 1972).

Because the defendant presented no evidence of prejudice, the *Beitscher* court was never forced to face the issue of whether actual prejudice alone or actual prejudice and intentional delay requires the dismissal of the prose-

cution. As did the court in *Lee*, *Beilscher* court merely paraphrased the language from this Court's decision in *Marion* which can be construed to require both actual prejudice and intentional delay.

Consequently, in no case presented to the Courts of Appeals has the defendant been able to show actual prejudice. It appears that the courts are proceeding to use the *Marion* decision as a guideline and decide each case on its own particular facts, as did the Montana Supreme Court.

An example is the language of the Tenth Circuit Court, which, in holding that the prosecution need not be dismissed stated: "We are convinced that defendant had a fair trial and was deprived of no Fifth or Sixth Amendment rights." *Merrick*, *supra* at 1091. It is therefore unnecessary for this court to intercede at this time.

IV.

IT IS NOT NECESSARY FOR THIS COURT TO REPORT A RECORD FACTUAL SITUATION TO INTERPRET THE MARION DECISION.

Finally, defendant contends that this court has not yet reported a record factual situation for the purpose of determining whether or not such situations occurring during pre-information delay is prejudicial to defendants defense. Nevertheless, defendant has cited no less than 13 cases in which fact situations have been presented and decided upon by Courts of Appeals. In addition this court has pointed out that with regard to pre-indictment delay "the rights of defendant to a fair trial will necessarily involve the delicate judgment based on the circumstances of each case." *Marion*, supra, at 325. Thus, so long as the general guidelines of the *Marion* case are followed so that the defendant receives a fair trial no record factual situation by this court is needed. In fact, such a case might result in strict adherence to set rules which might not apply in every case. This court should not intervene until it

appears that further elaboration on the *Marion* case is necessary to prevent prejudice to defendants' rights to a fair trial. At the present time, it appears the lower courts are preserving those rights adequately using the guidelines set out in the *Marion* decision.

CERTIFICATE OF SERVICE

I, Robert L. Woodahl, Attorney General of Montana, attorney for respondent, and a member of the Bar of the Supreme Court of the United States, do hereby certify that on the 13th day of February, 1975, served three (3) copies of the foregoing Brief in Opposition to Petition for Writ of Certiorari on petitioner by mailing said copies in a duly addressed envelope, with first class postage prepaid, to J. Chan Ettien, Attorney at Law, 339 Third Street, P.O. Box 1070, Havre, Montana 59501.

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APPENDIX A

EXCERPTS FROM YEAGER'S TESTIMONY

The testimony of Yeager as to his qualifications follows:

"Q. And what is your occupation?

A. I am a professor at the college.

Q. And what is your specialty at the college?

A. Chemistry.

Q. And do you teach chemistry at the college?

A. Yes.

Q. You are an instructor there?

A. Yes.

Q. And what are your degrees in chemistry?

A. I have a Bachelor of Arts and a Master of Arts.

Q. And that's in chemistry?

A. Yes.

Q. Now, how long have you been an instructor in chemistry?

A. Well, my first full teaching position started in 1936 but previously to that when I was an undergraduate, I did teaching at the same time.

Q. And prior to your teaching at the college, where did you teach?

A. I taught in several Montana high schools, Hingham, Great Falls, out in Washington one year.

Q. How long ago have you been ap at Hingham?

A. Nine years ago.

Q. You taught chemistry there?

A. Yes.

Q. In your teaching of chemistry classes, is that general organic chemistry?

A. Mostly organic. I also teach the introductory courses.

Q. And in the course of your teaching duties, does that take in both instruction through textbook and experimental work in labs?

A. Yes.

Q. In chemistry labs?

A. Yes.

Q. You have done that over the years through your teaching career?

A. Yes.

Q. And during your teaching career, have you become familiar with the various different derivatives of petroleums which make up gasoline, diesel fuel, stove fuel, distillates and that type of petroliphus substance?

A. Yes, I have.

Q. And have you devoted any extra time in the course of your career to the study of hydrocarbons?

A. Yes. I have always been quite interested in the refining process and petroleum. I have studied especially on that.

Q. Sort of a hobby with you?

A. Sort of a sideline."

(Tr.385, L.19 - Tr.387, L.07)

The testimony of Yeager concerning his method of detecting the elements of gasoline follows:

"Q. Now, you have been advised, have you not, that Mr. Burtchett destroyed the remaining parts of his house by fire back, or last summer sometime?

A. Yes.

Q. Now, if that house were still here available and that flooring was still existent, would there be a way to check the floor itself and the wood flooring to check it one way or another through sampling to test it?

A. Yes. It could be checked at any time.

Q. And if you were asked to do that, how would you do it?

A. Well, I would take a, probably first grind the wood up to get it in finer form, get it in some kind of tight container. Evacuate it to get the air out of it so it wouldn't have the air problem and heat it in a furnace of some type to volatilize anything in there which is volatile and the gases which came off that would be injected into the gas chromatograph and an electronic recorder would record all components which were in that particular fuel or that gas that came off the wood.

Q. So that you're saying here, taking the conclusions which you have given the Court here as to the probabilities of these petroleum compounds through scientific tests, sampling and testing, you could determine whether or not your conclusions were positively correct?

A. Well, I hate to say positively because there is room for error in any analytic procedure but I would say the gas chromatograph which we would get from that would be fairly consistent over a series of samples.

Q. Throughout the floor area?

A. Yes."

(Tr.30, l.15 - Tr.31, l.21)

"Q. Now, based on your testimony and the testimony which has been recited to you and I may further add that subsequent to the fire of May 14, Mr. Burtchett, with the consent of the City of Havre Fire Department and County Fire Department, finally just simply burned down the rest of his house the latter part of June, 1972. And, with that in mind, based on what you have already testified to, if that house still existed, would you be able to go in and take tests, samples of the floor and determine whether or not the flooring throughout the floor which was exposed to the asphalt compound and the soot smoke, contain components which were common to gasoline?

A. Yes. There would be very little problem there. Take the sample and process it.

Q. And based on the testimony which I have recited to you, in your opinion, would, if these tests had been able to have been taken, in your opinion, would

components common to gasoline have shown up in your tests on the chromatograph?

A. If they were there, they would show up.

Q. And based on the testimony which has been recited to you, would these various components and the various soot smoke which I have recited to you and the asphalt, would a number of these components which were common to gasoline show up on the chromatograph?

A. They could come from any of the petroleum products which had been subjected to heat?"

(Tr.392, l.29 - Tr.393, l.17)

APPENDIX B

EXCERPTS FROM MIDKIFF'S TESTIMONY

The testimony of Midkiff as to his qualifications follows:

"Q. And what is your occupation?

A. I am a forensic chemist with the Bureau of Alcohol, Tobacco and Firearms, U.S. Treasury Department.

Q. And what is your educational background?

A. I have a Bachelor's and Masters degree in chemistry from the George Washington University. I am presently enrolled from another program leading towards a Masters degree in Forensic Science, also, at the George Washington University.

Q. And did you have any background as a chemistry instructor?

A. Yes. I have served for the alternate years, for the past six years as an instructor in chemistry at the George Washington University.

Q. And could you tell us something about your work experience as a chemist?

A. Upon receiving my bachelors degree I was employed as a research chemist by the Arthur W. Sloan foundation in Virginia, in Alexandria, Virginia. I was employed by the Atlantic Research Corporation. By

Malpar, Incorporated at the Space Flight Center in Greenville, Maryland. By Vito Engineering Company at the Godard Space Center in Greenville, Maryland. By Marieta Corporation in Baltimore, Maryland. Now, with the U.S. Treasury Department.

Q. Could you explain just briefly what kind of work you did with those companies?

A. I was, in most of these areas, most of the earlier employment, I was employed as a research chemist. Primarily, analytical chemist and analyzing the number of different materials, which range from minerals to contaminants in space cabin atmospheres. Propellants, explosives. This type of material. At Marieta Corporation, I was supervisor of the analytical seminary for their lab corporation.

Q. When did you join the crime lab with the Alcohol, Tobacco and Firearms?

A. I came there in March, of 1971.

Q. And what is your position there?

A. I am a forensic chemist.

Q. And have you ever had occasion to publish any works, scientific nature?

A. Yes. I have seven or eight publications dealing with a number of aspects of chemistry.

A. And have you ever published on this subject of gas chromatography as it relates to accelerant material used in arson cases?

A. Yes, I have. There was an article which appeared in the journal of the association of official and political chemists.

MR. ETTIEN: If it please the Court, we will recognize Mr. Midkiff's qualifications.

Q. Have you ever in your work in this laboratory you are now employed by, had occasion to perform any analysis on arson cases?

A. Yes, I have.

Q. And approximately how many?

A. In 1970 or 1972, I worked on approximately four hun-

dred and thirty (430) cases involving arson and fire bombs.

Q. And in any of these arson cases did you have occasion to do any analysis on any tile or linoleum products?

A. Yes. I would estimate that approximately one sample in ten submitted to our laboratory involves some samples taken, tile or linoleum flooring type materials."

(Tr.78, l.20 - Tr.80, l.24)

The testimony of Midkiff as to the method used by the Alcohol, Tobacco and Firearms Laboratory follows:

"A. Yes, Your Honor. The method of examination used was to take a small syringe, hypodermic needle and insert it through the lid of the can and remove a sample of the air in the can. If a flammable liquid is present or, volatile liquid is present among the components in the can, it will also be present in the vapor in the can itself, in the rubbish, becomes mixed with the air in the can. This sample is injected into the gas chromatograph and a chart pattern is obtained to identify the particular material. The chart pattern obtained from the instrument is compared with that of known materials and one is able to identify the material as first, a volatile liquid is present in the sample and to identify the type of volatile liquid which was present.

(Tr.220, l.13 l.27)

"Q. Is your—does your laboratory perform many such types of analysis and investigations in arson cases?

A. Yes, we do.

Q. And how many have you performed, personally?

A. Last year, 1972, I examined evidence submitted in connection with approximately four hundred and thirty (430) arson and fire bomb cases.

Q. Is this method gas chromatography, is this a widely accepted method?

A. Yes, it is.

Q. And in your professional community?

A. Yes, it is.

Q. And is it an accurate method?

A. Yes. It is a very accurate method.

Q. In your analysis of these specimens, did you have to heat the specimens?

A. No. I did not."

(Tr.224, l.15 - Tr.225, l.01)

Q. Okay. Another little hypothetical — say there was three or four months lapse in time since the smoke permeation of wood with, say with a volatile petroleum distillate, and if you were to analyze this with or let me ask it this way: can you tell me of any technique that you might use to allow you to reliably find and identify the nature of the flammable liquid used?

A. If a sample has been, shall we say, stored in the open — in other words, not in a sealed container, based upon our experience and my familiarity with the techniques, I know of no reliable technique to detect and identify a volatile petroleum distillate after a period of say, several months has elapsed.

Q. Have you ever had occasion to experiment along this line?

A. Yes. We have performed some experiments in our laboratory involving again, a very similar situation. Just merely placing a sample of small amount of gasoline on a piece of wood and just allowing it to just gradually evaporate. This material just gradually disappears and after a period of a week or more, the amount of vapor is very small and essentially impossible to detect.

Q. Would you say after two weeks you could detect anything?

A. I believe, if I recall the experiment, after two weeks, I don't believe we were able to detect any appreciable vapor using our technique.

Q. Now, referring back to this affidavit that you have acknowledge that you read, by Francis Mayer, if suf-

ficient smoking conditions did exist, in your opinion, would this deposit a significant amount of petroleum anywhere?

A. I would not anticipate any appreciable quantity of material would be deposited. The material, the oils and so forth are not particularly volatile and while certainly, you would get some soot deposit and certainly some unburned material, I would not anticipate any situation wherein normal circumstances, you would deposit an appreciable amount of your oil or petroleum distillate.

Q. And you have read the affidavit and you have seen it. How many times he indicated he used this device and he indicated where the smoke went throughout the basement area?

A. Yes, I have.

Q. Now, this evidently covers quite a few square feet and knowing this, would you still make the same statement?

A. Yes, I would.

Q. Okay. Another hypothetical. Assume that in June of 1971, now, this is the time, is it not, that you performed the analysis upon the specimens in this case?

A. Yes, it is.

Q. Assume that you were to perform an analysis on the permeated wood, if it were permeated and the asphalt backed linoleum found in the area of the Defendant's home that were not burned, that with samples you analyzed, from burned holes in the floor, assume that you analyzed different parts of the floor that weren't burned by use of gas chromatography. Would the test give you the same chromtograms as you got in the analysis that Mr. Habeger sent?

A. No. They would not.

Q. And why not?

A. Again, the low nature, the low volatility of any of these heavier petroleum distillates, fuel oil, kerosene type and the very low volatility of materials like asphalt simply do not give you sufficient vapor to detect and analyze by the techniques we are using."

(Tr.87, L.10 - Tr.89, L.21)

"Q. Going back to the affidavit by Professor Yeager at the Northern Montana College, you stated your familiarity with it?

A. Yes.

Q. Would you turn to the second page of the affidavit and read out loud the first paragraph of his conclusion?

A. "Based on his knowledge and experience, affiant is of the opinion that the gasoline components described in said laboratory report could also have resulted from the things described in the affidavit of Francis Mayer".

Q. Do you agree with the conclusion?

A. No. I do not.

Q. Why don't you?

A. I think probably that the gentleman was not really thoroughly familiar with the technique we are using and really, how we go about making the examination. In other parts of his affidavit, he indicates that he could heat these materials and so forth and I have no dispute whatever, you know, with what he is saying, but I think he wasn't thoroughly familiar with the technique we are using which does not involve the heating of these materials. It does not involve any extraction of these materials and so our technique is really not suitable to picking up anything that does not have any appreciable volatility. The other things that may have mislead him somewhat is the wording of our report. Our laboratory report. I indicated in my laboratory report that benzine, hexane, toluene, and xylene were termed among the components of the vapor. That's true, but these were not the only components in the chromatogram. They were merely ones I identified. This is a standard mixture I use for the identification of the components. These were not the only components present. He, of course, did not have the opportunity to see our chromatograms and compare them with a chromatogram of gasoline or naptha. This would be the reason I did not agree with his conclusion. He was not really familiar with our technique.

Q. The things that Professor Yeager and Francis Mayer referred to, in their affidavits, would you say they are volatile or nonvolatile?

A. If the things, the asphalt linoleum material and this kerosene material type fuels, they are nonvolatile fuels.

Q. And what you identified were volatile?

A. Very volatile."

(Tr.90, 1.09 - Tr.91, 1.27)

APPENDIX C

EXCERPTS OF PRO'S TESTIMONY

The testimony of Pro as to his qualification follows:

"Q. And what is your occupation?

A. I am a chemist.

Q. Who do you work for?

A. I work for the U.S. Treasury Department, Bureau of Alcohol, Tobacco and Firearms.

Q. Is that what you would call a crime laboratory?

A. It's the scientific service division. The crime laboratory is a branch in that division.

Q. I see. And, would you state to the Court and the jury some of your educational background as far as chemistry is concerned?

A. Yes. My undergraduate work was at NYU. My graduate work was at Columbia. Following school work, about 1941, I went to work for National Lead Research Laboratories. From there I went into the army. Upon release from the army, I worked for the Manhattan Project and about 1949 I went to work for the Treasury Department.

Q. What degrees do you hold in chemistry, if any?

A. Bachelors and Masters.

Q. Bachelors and Masters. In the course of your scientific work, have you ever had occasion to publish

any works in any of the scientific works in any of the scientific journals?

A. Yes. While I was at the Treasury Department I published, to date, sixty-three articles and I have contributed a number of chapters to five textbooks in the various fields of chemistry.

Q. In June of 1971, what position did you hold in the laboratory in Washington, D.C.?

A. At that time I was chief of the forensic branch.

Q. And is it true that at that time Charles Midkiff, who previously gave testimony in this case, was under your supervision?

A. Yes, sir.

Q. And have you personally ever done any laboratory investigation in arson cases?

A. Yes. Efforts in this area were started about four years ago and this was in connection with the Federal Government's aid to State and local governments in the area of fire bombs, bombings, guns and as a result of this bill, we went into the arson work in this department and this is primarily because of the fire bomb situation which covered all types of arsons, bombings.

Q. Did your duties in June of 1971, at the forensic lab include the supervision of analysis in arson cases and material suspected in arson cases?

A. Yes. All the work that was carried out was under my supervision."

(Tr.402, 1.17 - Tr.404, 1.05)

On cross-examination:

"A. Well—

MR. ETTIEN: Your Honor, may I voir dire, just a moment? I want to establish whether or not he is qualified. He hasn't at this point, he hasn't, he hasn't testified he is experienced on a chromatograph. I don't want to make the State's case but there is no—

THE COURT: Your objection is on lack of foundation. I think that you might explore that a bit more. Sustain the objection.

Q. Have you ever had occasion, personally, to operate a gas chromatography machine?

A. I would like to point out, I might answer you indirectly.

MR. ETTIEN: Just a moment. I am going to object.

A. Alright. I have, yes. I have.

MR. ETTIEN: I understand, Mr. Pro. I am not trying to louse this up. That is not responsive to the question.

THE COURT: Very well. He has answered yes, I believe.

Q. Would you explain your use of the machine?

A. I bought the first machine in the Bureau. I was one of the pioneers in this work and I now have fourteen machines in my department and a number of these machines in our field laboratories. And, I have sponsored this type of forensic application that is gas chromatography and scientific crime detection. This came under my supervision. Basically our forensic branch was the old research and development. We just grew into a large forensic area which now has been severed and a new research and development branch set up but these machines are well known to me.

Q. Are you familiar then with the results one would get, the machines, the chromatograph?

A. Yes."

(Tr.406, L.13 - Tr.407, L.20)

The testimony of Pro as to the effect of the asphalt and soot on Midkiff's test follows:

"Q. Mr. Pro, I am going to ask you some hypothetical questions. They may be a little involved because I have to relate some of the testimony and evidence that has been introduced in this case. There has been testimony given by Francis "Buzz" Mayer in this case on, that on various occasions he went to the basement of the Defendant's home to thaw pipes that had been frozen by the weather and to thaw

the pipes, he used a small sort of little tank heater with a chimney and a wick and I think it has been described as an old fashioned kerosene heater. Are you familiar with that type apparatus?

A. Yes.

Q. There has been testimony that what was burned in that apparatus on the occasions he operated it was kerosene, maybe diesel fuel, something of that nature. And he testified that once he did not operate the machine but he smelled it and thought he smelled that gasoline had been in there, and at any rate, when operating this device, he testified that the draft in the basement of the building here that you see a diagram, caused smoke to whirl around. He said black, sooty smoke caused by inefficient burning of the kerosene and diesel fuels in the apparatus and he also testified there was some testimony, I should say, that the type of linoleum that was on the floor, main floor of the house seemed to be the type that had a petroleum base. Now, if we were to take samples from that floor that hadn't been burned, just the smoke permeated wood and we were to take some of the asphalt based linoleum, and we were to put in a container such as this and were to seal it and without heating it, at room temperature, insert a syringe and draw the vapors out, and we were to insert that vapor or sample into a gas chromatography machine, by the way, you testified that you are familiar with that device?

A. Yes.

Q. We were to insert that type of sample into a gas chromatography machine, what type of chromatograph would you get?

A. Well—

MR. ETTIEN: Your Honor, may I voir dire, just a moment? . . ."

(Tr.405, 1.03 - Tr.406, 1.15)

MR. ALTMAN: Now, let's go back to the question that we were trying to get answered. You recall that I asked you—described the wooden floor that possibly had been permeated with smoke from this

inefficient burning apparatus and inside the apparatus were kerosene and possibly diesel fuel and then we had a petroleum based linoleum. If you were to take samples of that smoke permeated wood and, were to take particles or pieces of the asphalt based linoleum and put it in a coffee container such as I have here and put a lid on it and seal it and inject through the plastic lid a hypodermic syringe and withdraw an air sample from inside, now, this is all without heating the contents or the can, normal room temperature, take that air sample that you would withdraw and inject it into a gas chromatography machine, what would you get from this?

A. Well—

Q. On your machine?

A. Well, from soot on wood and linoleum and whatever other materials you may have deposited from the burning, results from combustion, you would get, in all probability, just a straight line. You wouldn't get any volatile materials because first of all, linoleum is not volatile. By that, I mean it doesn't evaporate like gasoline because if it did, in six months you wouldn't have any linoleum. It would be evaporated. It's just not the nature of the product. If your wood had soot on it, soot does not evaporate. You just wouldn't get anything. The whole principle behind gas chromatography is measuring something that is volatile. Something that evaporates from the bulk of the material that is laid down. Now, gasoline is another thing. If you place gasoline in a can, much of that gasoline is in a vapor state or goes into equilibrium with the liquid. So, the liquid and the gases are in equilibrium within that can as far as it can't escape from that can. A certain percentage of that gas goes into the gas phase and that is what you siphon out and of course, you get a gasoline chromatogram.

Q. If we were to take the situation as it does exist, the Fire Marshal removed samples from an area of the Defendants floor that had been burned, a hole was burned in the floor. He cut samples of the burned in the floor. He cut samples of the burned charred wood. He put it in this container and he sealed it. And he sent it to your laboratory and if you were to receive this and once again stick a hypodermic needle in there

and withdraw let me go back. My hypothetical. If the burned area of the floor, it wouldn't be saturated with gasoline or a volatile, if you were to put your hypodermic needle in there and withdraw an air sample and inject that into your gas chromatography machine, what would you get?

A. You would get a resultant chromatogram which would be, that of gasoline. Now, the very function of the machine.

MR. ETTIEN: Just a moment. The witness has answered."

(Tr.410, l.25 - Tr.412, l.23)